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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/014,689	Applicant(s) WANG ET AL.	
	Examiner Andy S. Rao	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5 and 7-25* is/are rejected.

7)☒ Claim(s) *3 and 6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/15/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 5, 7, 10-12, 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al., (hereinafter referred to as "Kim").

Kim discloses a method for decoding image data (Kim: figure 3B) comprising: receiving encoded image data (Kim: column 4, lines 1-10) comprising I-picture, P-picture, and B- picture data (Kim: column 4, lines 35-45); performing inverse discrete cosine transform IDCT decoding on l-picture data at a first resolution (Kim: column 4, lines 45-55); storing the decoded I-picture data (Kim: column 5, lines 30-35), scaling the stored I-picture data based on a display size (Kim: column 5, lines 55-67), and outputting the scaled I-picture data for display (Kim: column 6, lines 50-60), performing IDCT decoding on P-picture data at the first resolution (Kim: column 6, lines 15-20), performing motion compensation processing on the decoded P-picture data (Kim: column 7, lines 50-67); storing the motion-compensated P-picture data (Kim: column 4, lines 30-35), scaling the stored P-picture data based on the display size (Kim: column 5, lines 55-67), and outputting the scaled P-picture data for display (Kim: column 6, lines 50-60); performing IDCT decoding on B-picture data at a second resolution (Kim: column 4,

lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames); the second resolution being lower than the first resolution (Kim: column 5, lines 5-10), performing motion compensation processing on the decoded B-picture data (Kim: column 5, lines 35-45); and storing the motion-compensated B-picture data, scaling the stored B-picture data to the display size (Kim: column 6, lines 25-35), and outputting the scaled B-picture data for display (Kim: column 6, lines 50-60), as claim 1.

Regarding claim 5, Kim discloses up-sampling the IDCT decoded B picture data to the first resolution prior to performing motion compensation (Kim: column 6, lines 30-37), as in the claim.

Kim discloses a system for decoding image data (Kim: figure 2A) including I-picture, P-picture, and B- picture encoded data (Kim: column 4, lines 35-45), comprising: a memory (Kim: column 5, lines 25-35); IDCT decoder for performing inverse discrete cosine transform IDCT decoding on l-picture and P-picture data at a first resolution (Kim: column 4, lines 45-55; column 6, lines 15-20) and on B-picture data (Kim: column 4, lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames) at a second resolution lower than the first resolution (Kim: column 5, lines 5-10); a processor for storing the decoded I picture data in the memory, performing motion compensation processing on the decoded P-picture and B-picture data, and storing the motion-compensated P-picture and B-picture data in memory (Kim: column 5, lines 35-45); and a

video scaler which scales the stored I-picture, P-picture and B-picture based on a display size and outputs the scaled data for display (Kim: column 6, lines 50-60), as in claim 7.

Kim discloses a system for decoding image data (Kim: figure 2A) including I-picture, P-picture, and B- picture encoded data (Kim: column 4, lines 35-45), comprising: a memory (Kim: column 5, lines 25-35); IDCT decoder for performing inverse discrete cosine transform IDCT decoding on l-picture data, P-picture data, and B-picture data (Kim: column 4, lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames) at a first resolution lower than the resolution of the original unencoded picture (Kim: column 5, lines 5-10; column 13, lines 50-67); a processor for storing the decoded I picture data in the memory, performing motion compensation processing on the decoded P-picture and B-picture data, and storing the motion-compensated P-picture and B-picture data in memory (Kim: column 5, lines 35-45); and a video scaler which scales the stored I-picture, P-picture and B-picture based on a display size and outputs the scaled data for display (Kim: column 6, lines 50-60), as in claim 10.

Kim discloses a method for decoding image data (Kim: figure 3B) comprising: receiving an array of DCT "discrete cosine transform (Kim: column 4, lines 35-47) representing a block of image data of one of plurality of types of pictures (Kim: column 4, lines 35-45; column 6, lines 10-15); performing inverse discrete cosines transform on a sub-portion of the DCT coefficients obtain a block of pixel data (Kim: column 4, lines 45-55) equal in size to the sub-portion if the block of the image data represents a first type of picture (Kim: column 4, lines 40-45); performing motion compensation on the

block of pixel data to obtain a second block of pixel data (Kim: column 7, lines 50-67); scaling the second block of pixel data based on a size of a display (Kim: column 5, lines 55-67), and displaying the second block of pixel data (Kim: column 6, lines 50-60), as in claim 11.

Regarding claim 12, wherein the first type of picture is a B-picture data (Kim: column 4, lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames), as in the claim.

Kim discloses a method for decoding image data (Kim: figure 3B) comprising: receiving an array of DCT "discrete cosine transform (Kim: column 4, lines 35-47) representing a block of image data of one of plurality of types of pictures (Kim: column 4, lines 35-45; column 6, lines 10-15); performing inverse discrete cosines transform on a sub-portion of the DCT coefficients obtain a block of pixel data (Kim: column 4, lines 45-55) equal in size to the sub-portion if the block of the image data represents a first type of picture (Kim: column 4, lines 40-45); up-sampling the first block of pixel data to obtain a second block of pixel data (Kim: column 6, liens 30-35); performing motion compensation on the second block of pixel data to obtain a third block of pixel data (Kim: column 7, lines 50-67); and displaying the third block of pixel data (Kim: column 6, lines 50-60), as in claim 15.

Regarding claim 16, Kim discloses scaling the third block of pixel data based on the size of a display (Kim: column 6, lines 50-60), as in the claim.

Regarding claim 17, wherein the first type of picture is a B-picture data (Kim: column 4, lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames), as in the claim.

5. Claims 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakajima et al., (hereinafter referred to as "Nakajima").

Nakajima discloses a method for a decoder (Nakajima: column 3, lines 30-35), comprising: receiving encoded image data (Nakajima: column 6, lines 30-35); and selectively performing a modified inverse discrete cosine transform (DCT) process to generate an output pixel array block at a lower resolution than the resolution of the received encoded image (Nakajima: column 5, lines 25-55), as in claim 23.

Regarding claim 24, Nakajima discloses wherein the output pixel array block includes a 4x8 block or a 4x4 block (Nakajima: column 1, lines 45-50), as in the claim.

6. Claim 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Jahanghir et al., (hereinafter referred to as "Jahanghir").

Jahanghir discloses a computer readable medium contain instructions (Jahanghir: column 9, lines 10-45), which if executed by a computer system (Jahanghir: column 8, lines 25-35), causes the computer system to perform an operation for decoding image data, the operation comprising: receiving encoded image data (Jahanghir; column 7, lines 1-10); and selectively performing a modified inverse discrete transform process (IDCT) to generate an output pixel array block at a lower resolution that the resolution of the received encoded image data (Jahanghir: column 7, lines 25-35), as in claim 25.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2, 4, 8-9, 13-14, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., (hereinafter referred to as "Kim") in view of Nakajima et al., (hereinafter referred to as "Nakajima").

Kim discloses a method for decoding image data (Kim: figure 3B) comprising: receiving encoded image data (Kim: column 4, lines 1-10) comprising I-picture, P-picture, and B- picture data (Kim: column 4, lines 35-45); performing inverse discrete cosine transform IDCT decoding on l-picture data at a first resolution (Kim: column 4, lines 45-55); storing the decoded I-picture data (Kim: column 5, lines 30-35), scaling the stored I-picture data based on a display size (Kim: column 5, lines 55-67), and outputting the scaled I-picture data for display (Kim: column 6, lines 50-60), performing IDCT decoding on P-picture data at the first resolution (Kim: column 6, lines 15-20), performing motion compensation processing on the decoded P-picture data (Kim: column 7, lines 50-67); storing the motion-compensated P-picture data (Kim: column 4, lines 30-35), scaling the stored P-picture data based on the display size (Kim: column 5, lines 55-67), and outputting the scaled P-picture data for display (Kim: column 6, lines 50-60); performing IDCT decoding on B-picture data at a second resolution (Kim: column 4, lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is

inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames); the second resolution being lower than the first resolution (Kim: column 5, lines 5-10), performing motion compensation processing on the decoded B-picture data (Kim: column 5, lines 35-45); and storing the motion-compensated B-picture data, scaling the stored B-picture data to the display size (Kim: column 6, lines 25-35), and outputting the scaled B-picture data for display (Kim: column 6, lines 50-60), as claims 2 and 4. And even though Kim does disclose reduced resolution decoded images, it fails to disclose full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) as in the claims. Nakajima discloses that for decoding MPEG coded video it is known to use full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) for the IDCT process (Nakajima: column 1, lines 40-50) in order to have a reduced memory in motion compensation (Nakajima: column 2, lines 1-5). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate Nakajima's usage of full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) into the Kim method in order reduce space in the frame memory. The Kim method, now incorporating Nakajima's full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4), has all of the features of claims 2 and 4.

Kim discloses a system for decoding image data (Kim: figure 2A) including I-picture, P-picture, and B- picture encoded data (Kim: column 4, lines 35-45), comprising: a memory (Kim: column 5, lines 25-35); IDCT decoder for performing inverse discrete

cosine transform IDCT decoding on l-picture and P-picture data at a first resolution (Kim: column 4, lines 45-55; column 6, lines 15-20) and on B-picture data (Kim: column 4, lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames) at a second resolution lower than the first resolution (Kim: column 5, lines 5-10); a processor for storing the decoded I picture data in the memory, performing motion compensation processing on the decoded P-picture and B-picture data, and storing the motion-compensated P-picture and B-picture data in memory (Kim: column 5, lines 35-45); and a video scaler which scales the stored I-picture, P-picture and B-picture based on a display size and outputs the scaled data for display (Kim: column 6, lines 50-60), as in claim 8. And even though Kim does disclose reduced resolution decoded images, it fails to disclose full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) as in the claims. Nakajima discloses that for decoding MPEG coded video it is known to use full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) for the IDCT process (Nakajima: column 1, lines 40-50) in order to have a reduced memory in motion compensation (Nakajima: column 2, lines 1-5). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate Nakajima's usage of full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) into the Kim system in order reduce space in the frame memory. The Kim system, now incorporating

Nakajima's full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4), has all of the features of claim 8.

Regarding claim 9, the Kim system, now incorporating Nakajima's full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4), has and up-sampling element which converts the B-picture data (Kim: column 6, lines 30-45), as specified.

Kim discloses a method for decoding image data (Kim: figure 3B) comprising: receiving an array of DCT "discrete cosine transform (Kim: column 4, lines 35-47) representing a block of image data of one of plurality of types of pictures (Kim: column 4, lines 35-45; column 6, lines 10-15); performing inverse discrete cosines transform on a sub-portion of the DCT coefficients obtain a block of pixel data (Kim: column 4, lines 45-55) equal in size to the sub-portion if the block of the image data represents a first type of picture (Kim: column 4, lines 40-45); performing motion compensation on the block of pixel data to obtain a second block of pixel data (Kim: column 7, lines 50-67); scaling the second block of pixel data based on a size of a display (Kim: column 5, lines 55-67), and displaying the second block of pixel data (Kim: column 6, lines 50-60), as in claims 13-14. And even though Kim does disclose reduced resolution decoded images, it fails to disclose full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) as in the claims. Nakajima discloses that for decoding MPEG coded video it is known to use full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) for the IDCT process (Nakajima: column 1, lines 40-50) in order to have a reduced memory in motion compensation (Nakajima: column 2, lines 1-5).

Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate Nakajima's usage of full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) into the Kim method in order reduce space in the frame memory. The Kim method, now incorporating Nakajima's full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4), has all of the features of claims 13-14.

Kim discloses a method for decoding image data (Kim: figure 3B) comprising: receiving an array of DCT "discrete cosine transform (Kim: column 4, lines 35-47) representing a block of image data of one of plurality of types of pictures (Kim: column 4, lines 35-45; column 6, lines 10-15); performing inverse discrete cosines transform on a sub-portion of the DCT coefficients obtain a block of pixel data (Kim: column 4, lines 45-55) equal in size to the sub-portion if the block of the image data represents a first type of picture (Kim: column 4, lines 40-45); up-sampling the first block of pixel data to obtain a second block of pixel data (Kim: column 6, liens 30-35); performing motion compensation on the second block of pixel data to obtain a third block of pixel data (Kim: column 7, lines 50-67); and displaying the third block of pixel data (Kim: column 6, lines 50-60), as in claim 18-19. And even though Kim does disclose reduced resolution decoded images, it fails to disclose full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) as in the claims. Nakajima discloses that for decoding MPEG coded video it is known to use full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) for the IDCT process (Nakajima: column 1, lines 40-50) in

order to have a reduced memory in motion compensation (Nakajima: column 2, lines 1-5). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate Nakajima's usage of full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4) into the Kim method in order reduce space in the frame memory. The Kim method, now incorporating Nakajima's full vertical resolution and ½ horizontal resolution (i.e. 4x8) or full vertical resolution and full horizontal resolution (i.e. 4x4), has all of the features of claims 18-19.

9. Claims 20-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., (hereinafter referred to as "Kim") in view of Jahanghir et al. (hereinafter referred to as "Jahanghir").

Kim discloses an operation (Kim: figure 3B) comprising: receiving encoded image data (Kim: column 4, lines 1-10) comprising I-picture, P-picture, and B- picture data (Kim: column 4, lines 35-45); performing inverse discrete cosine transform IDCT decoding on l-picture data at a first resolution (Kim: column 4, lines 45-55); storing the decoded I-picture data (Kim: column 5, lines 30-35), scaling the stored I-picture data based on a display size (Kim: column 5, lines 55-67), and outputting the scaled I-picture data for display (Kim: column 6, lines 50-60), performing IDCT decoding on P-picture data at the first resolution (Kim: column 6, lines 15-20), performing motion compensation processing on the decoded P-picture data (Kim: column 7, lines 50-67); storing the motion-compensated P-picture data (Kim: column 4, lines 30-35), scaling the stored P-picture data based on the display size (Kim: column 5, lines 55-67), and outputting the scaled P-picture data for display (Kim: column 6, lines 50-60); performing

IDCT decoding on B-picture data at a second resolution (Kim: column 4, lines 35-45; column 6, lines 10-25: although not specifically not mentioned, B-frame is inherent in the disclosed motion compensation since MPEG-2 compression is established and there are two reference frame memories which would be need for B-frames); the second resolution being lower than the first resolution (Kim: column 5, lines 5-10), performing motion compensation processing on the decoded B-picture data (Kim: column 5, lines 35-45); and storing the motion-compensated B-picture data, scaling the stored B-picture data to the display size (Kim: column 6, lines 25-35), and outputting the scaled B-picture data for display (Kim: column 6, lines 50-60), as claim 20. However, Kim fails to disclose that the operation is in the form of a computer readable medium contain instructions, which when executed by a computer system, causes the computer to perform an operation. Jahanghir discloses that for a decoding method including resolution conversion (Jahanghir: column 6, lines 37-60) is known the put the method in the form a computer readable medium contain instructions pertaining to the method (Jahanghir: column 8, lines 25-45; column 9, lines 10-30) in order implement the method with the internet (Jahanghir: column 10, lines 4-30). Accordingly, given this teaching, it would have obvious for one of ordinary skill in the art to incorporate the computer readable medium implementation as shown by Jahanghir into the Kim method in order to have the Kim method implemented on the internet. The Kim method, now modified to be in the form of a computer readable medium as shown by Jahanghir, has all of the features of claim 20.

Kim discloses an operation (Kim: figure 3B) comprising: receiving an array of DCT "discrete cosine transform (Kim: column 4, lines 35-47) representing a block of

image data of one of plurality of types of pictures (Kim: column 4, lines 35-45; column 6, lines 10-15); performing inverse discrete cosines transform on a sub-portion of the DCT coefficients obtain a block of pixel data (Kim: column 4, lines 45-55) equal in size to the sub-portion if the block of the image data represents a first type of picture (Kim: column 4, lines 40-45); performing motion compensation on the block of pixel data to obtain a second block of pixel data (Kim: column 7, lines 50-67); scaling the second block of pixel data based on a size of a display (Kim: column 5, lines 55-67), and displaying the second block of pixel data (Kim: column 6, lines 50-60), as in claim 21. However, Kim fails to disclose that the operation is in the form of a computer readable medium contain instructions, which when executed by a computer system, causes the computer to perform an operation. Jahanghir discloses that for a decoding method including resolution conversion (Jahanghir: column 6, lines 37-60) is known the put the method in the form a computer readable medium contain instructions pertaining to the method (Jahanghir: column 8, lines 25-45; column 9, lines 10-30) in order implement the method with the internet (Jahanghir: column 10, lines 4-30). Accordingly, given this teaching, it would have obvious for one of ordinary skill in the art to incorporate the computer readable medium implementation as shown by Jahanghir into the Kim method in order to have the Kim method implemented on the internet. The Kim method, now modified to be in the form of a computer readable medium as shown by Jahanghir, has all of the features of claim 21.

Kim discloses an operation (Kim: figure 3B) comprising: receiving an array of DCT "discrete cosine transform (Kim: column 4, lines 35-47) representing a block of image data of one of plurality of types of pictures (Kim: column 4, lines 35-45; column 6,

lines 10-15); performing inverse discrete cosines transform on a sub-portion of the DCT coefficients obtain a block of pixel data (Kim: column 4, lines 45-55) equal in size to the sub-portion if the block of the image data represents a first type of picture (Kim: column 4, lines 40-45); up-sampling the first block of pixel data to obtain a second block of pixel data (Kim: column 6, liens 30-35); performing motion compensation on the second block of pixel data to obtain a third block of pixel data (Kim: column 7, lines 50-67); and displaying the third block of pixel data (Kim: column 6, lines 50-60), as in claim 22. However, Kim fails to disclose that the operation is in the form of a computer readable medium contain instructions, which when executed by a computer system, causes the computer to perform an operation. Jahanghir discloses that for a decoding method including resolution conversion (Jahanghir: column 6, lines 37-60) is known the put the method in the form a computer readable medium contain instructions pertaining to the method (Jahanghir: column 8, lines 25-45; column 9, lines 10-30) in order implement the method with the internet (Jahanghir: column 10, lines 4-30). Accordingly, given this teaching, it would have obvious for one of ordinary skill in the art to incorporate the computer readable medium implementation as shown by Jahanghir into the Kim method in order to have the Kim method implemented on the internet. The Kim method, now modified to be in the form of a computer readable medium as shown by Jahanghir, has all of the features of claim 22.

Allowable Subject Matter

10. Claims 3 and 6 are objected to as being dependent upon a rejected base claim 1, but would be allowable if rewritten in independent form including all of the limitations of the base claim 1 and intervening claim 2 for claim 3, and intervening claim 5 for claim 6.

Dependent claims 3 and 6 recite "...wherein performing motion compensation processing on the decoded B-picture data includes: retrieving stored picture data at the first resolution based on motion vector data; determining if the motion vector data specifies a pixel position that does not have a corresponding pixel within the retrieved picture data; up-sampling the retrieved picture data to compute the missing pixel if the motion vector data is determined to specify a pixel position that does not have a corresponding pixel within the retrieved picture data; and down-sampling the picture data with the computed missing pixel to the second resolution..." which is a feature that is not anticipated nor obvious over the art of record. Accordingly, if claims 3 and 6 are amended as indicated above, and rejected claims 1-2, 4-5, and 7-25 are canceled, the application would be placed in condition for allowance.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Boyce discloses method and apparatuses for efficiently decoding bi-directionally coded image data. Choi discloses a low level video decoder for HDTV having backward compatibility. Iaquinto discloses an HDTV down-conversion system.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Andy S. Rao
Primary Examiner
Art Unit 2621

asr
July 19, 2006

ANDY RAO
PRIMARY EXAMINER